

ABSTRACT OF THE DISCLOSURE

The present invention provides a method and apparatus for optical spectral power monitoring that employ a time-division-multiplexed detection scheme. The optical spectral power monitoring apparatus of the present invention uses a wavelength-dispersing means such as a

5. diffraction grating to separate a multi-wavelength optical signal into multiple spectral channels and an array of beam-manipulating elements positioned to correspond with the spectral channels. The beam-manipulating elements are individually controllable so as to direct the spectral channels into an optical detector in a time-division-multiplexed sequence. The optical spectral power monitoring apparatus may further employ a polarization diversity

10 scheme, thereby becoming polarization insensitive. This enables the apparatus of the present invention to enhance spectral resolution, while providing improved accuracy in optical spectral power detection. Accordingly, a variety of novel optical spectral power monitors can be constructed according to the present invention, that are well suitable for WDM optical networking applications.